WASHINGTON DEPARTMENT OF ECOLOGY

ENVIRONMENTAL ASSESSMENT PROGRAM

FRESHWATER MONITORING UNIT

STREAM DISCHARGE TECHNICAL NOTES

STATION ID: 01R090

STATION NAME: California Cr. @ Valley View Rd.

WATER YEAR: 2010

AUTHOR: Chuck Springer

Introduction

Watershed Description

California Creek is a lowland stream that flows directly into Drayton Harbor in Puget Sound. The drainage area of California Creek makes up 38% of the Drayton Harbor watershed, with the upper half consisting primarily of dairy farms and agriculture, and the lower portion sparsely populated with residences and small farms. California Creek supports populations of coho salmon and cutthroat trout.

Gage Location

This gage is located at Valley View Road, northwest of the town of Custer. The gage was upgraded from a staff-gage-only station to a continuous monitoring station as part of the Drayton Harbor Watershed Fecal Coliform TMDL study in November 2007.

Table 1.

Drainage Area (square miles)	11.2
Latitude (degrees, minutes, seconds)	48° 55' 17" N
Longitude (degrees, minutes, seconds)	-122° 39' 32" W

Discharge

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	23
Median Annual Discharge (cfs)	15
Maximum Daily Mean Discharge (cfs)	84
Minimum Daily Mean Discharge (cfs)	4.9
Maximum Instantaneous Discharge (cfs)	155
Minimum Instantaneous Discharge (cfs)	4.4
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	59
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	5.3
Number of Days Discharge is Greater Than Range of Ratings	0
Number of Days Discharge is Less Than Range of Ratings	0

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

Narrative

This station was removed in December 2009. Water year statistics are for October 1, 2009 - December 7, 2009. The short period in which this station operated in water year 2010 saw numerous storm events, including a series of events in November 2009 that elevated flows in this small agricultural stream to nearly 200 cfs.

Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	31.5%
Weighted Rating Error (% of discharge)	13.8%
Total Potential Error (% of discharge)	45.3%

Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	9		
Period of Ratings	10/1/09 - 12/7/09		
Range of Ratings (cfs)	0 - 183		
No. of Defining Measurements	5		
Rating Error (%)	13.8%		

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Narrative

This station was removed in December 2009. Water year statistics are for October 1, 2009 - December 7, 2009.

Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	2.13
Maximum Recorded Stage (feet)	6.76
Range of Recorded Stage (feet)	4.63
Number of Un-Reported Days	0
Number of Days Qualified as Estimates	16
Number of Days Qualified as Unreliable Estimates	0

Narrative

This station was removed in December 2009. Water year statistics are for October 1, 2009 - December 7, 2009. This station logged continuously without interruption in water year 2009 until its removal in December. Moderate pressure transducer drift resulted in several days being flagged as estimates.

Modeled Discharge

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	none
Range of Modeled Stage (feet)	
Range of Modeled Discharge (cfs)	
Valid Period for Model	
Model Confidence	

Surveys

Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date
none	

Activities Completed

This station was permanently removed in December 2009.